

SOME SUGGESTIONS FOR IMPROVING CORN CROP

The Double Aim of the Corn Breeder—By Prof. E. S. David, Iowa.

The field of work for the corn breeder is two fold. He should first produce a variety which will yield the largest amount of sound, marketable corn in his locality, and secondly, he should induce others by word and practice to grow a better type. Of course, his object is to sell his corn to them when they become fully appreciative. Three points should be given attention in improvement of corn: Prevention of inbreeding; fixing a definite type; and securing the maximum yield.

If the corn is not inbred it will not run out so soon when it is used in the field by the growers. Fixing a definite type tends also toward the same end, but is broader, in that it also aids in maintaining a maximum yield of sound corn.

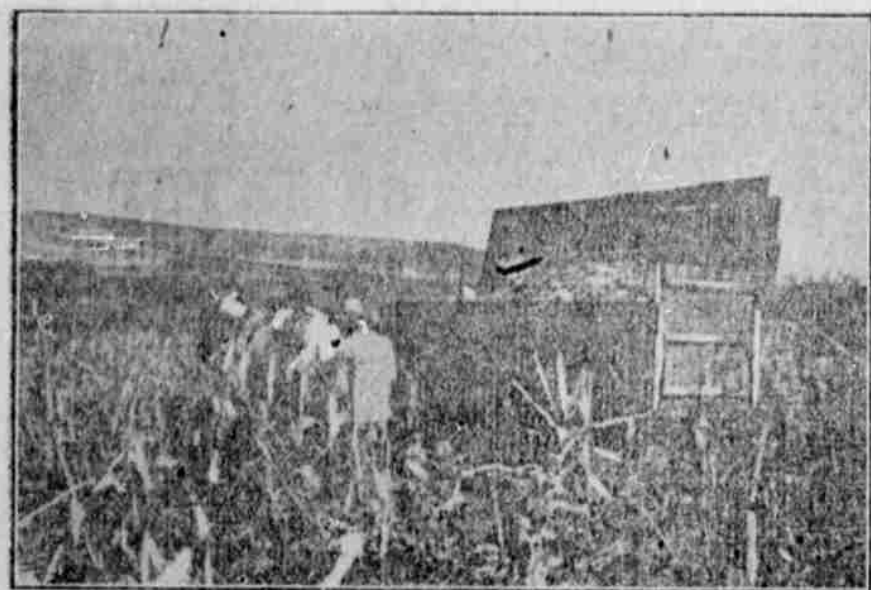
Preserving the seed is of the greatest importance. Each ear should be cared for as if it were a finely bred animal. In one of them may be the developing of a type of corn which will surpass any other variety. If the seed shed is well ventilated and the corn is dry before freezing, there is no danger of the vitality being injured during the winter. Nevertheless, all the corn should be tested with the germination box and all doubtful ears discarded.

Each ear should be carefully examined in regard to type. Choose

block should have the average soil composition and treatment. It is absolutely necessary that it should be free from cross-pollination. When sucker, broken and barren stalks appear they should be removed. If hot rows do not tassel at the same time, detassel the one appearing first. Probably by the time the silks appear on this row the other row will have tasseled. If both tassel at the same time the one with strongest stalks should be detasseled and used as the mother stalk.

The seed to be saved is to come from the detasseled row, as it is not inbred. This corn will give as near as possible the three fundamental points for which the breeder was working. First, inbreeding has been prevented; second, by selection, a definite type has been secured; and, third, the yield is being increased. For more work it is necessary to select the best ears from this crop and make a test with them as was done with the parent ears.

After a high grade of seed has been produced it is necessary to get it before the growers. The breeder should interest himself in the improvement of the grower's corn. This will be done by taking interest in all the corn shows and contests in his locality. His best corn should be shown in



HUSKING FROM THE STANDING STALKS.
A Good Time to Select the Seed Ears.

only ears that conform to the same type. They should be of the same size and shape. Straightness of rows should be considered. The distance between them should be only great enough to allow the corn to mature and dry out thoroughly. It is very important that the kernels be of the same size and shape. This makes the work of grading very simple.

After this selection has been made take enough corn from one side of each ear to plant 50 hills. The ears are then to be wrapped, labeled and stored. It is very important to keep them in perfect condition, as further work depends on their vitality the following spring. A plot should be selected where the corn taken from each year can be planted in a separate row. Give the rows the ordinary soil. Let the method of preparation of ground and tending of crop be what would be given a regular field. Sucker broken and barren stalks are to be removed in due season. In the fall harvest each row and calculate the yield of each one. This corn is not to be used for further breeding operations.

The ears which have the highest yielding powers can now be selected for further use. From these select two which nearest approach the same type. Plant the remainder of the ears in alternate rows in a breeding plant. This

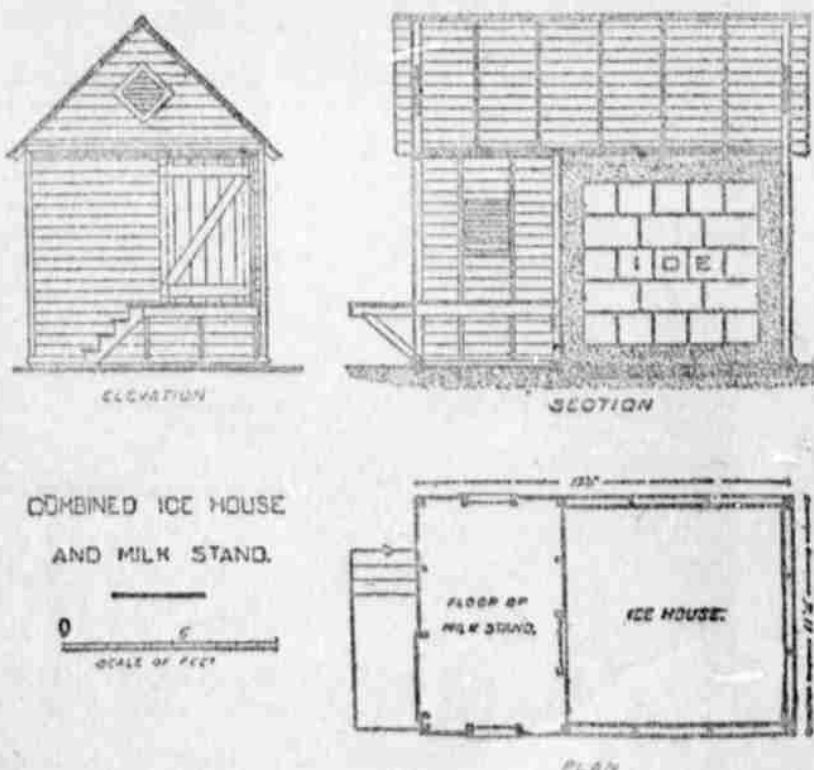
open competition. This will put his product before all the corn growers in his vicinity. If he wishes to send corn to some other locality it can best be done by carrying an advertisement in some reliable farm paper which reaches that section.

After a patron has been secured every effort should be made to keep his business. This will be done only by selling corn which is strong in vitality and breeding. The breeder has developed a type of corn which is strong in breeding. He must then look to the keeping of the vitality. The corn should be stored in the same shed he would keep his in. In the late winter all the corn should be tested with a germination box. Inferior ears should be discarded and the good ones put up in a slatted crate. The breeder cannot expect to satisfy patrons or help in the improvement of corn by sending the same variety to localities of varying conditions.

Set the Boys a Good Example.—Teach the boys to be gentle with the cows. It is better for the cows, and the boys, too.

Don't Try It.—Life is too short and feed too high to be squandering either making dairy beef instead of gilt-edge butter.

An Ice House and Milk Stand



The illustration shows an arrangement for the storage of ice in connection with a milk stand, designed to meet the needs of patrons of cheese factories and creameries. Many farmers have adopted this plan and they find that it gives protection from the weather and dust, and also from animals or insects, if all openings are

provided with screens, as a convenience for the cooling of the milk. It cannot be too highly recommended. Very great improvement would be made in our hot weather cheese if the night's milk was always properly cooled, and the saving of time to cases where the milk turns sour before reaching the factory would amount to a very considerable sum.

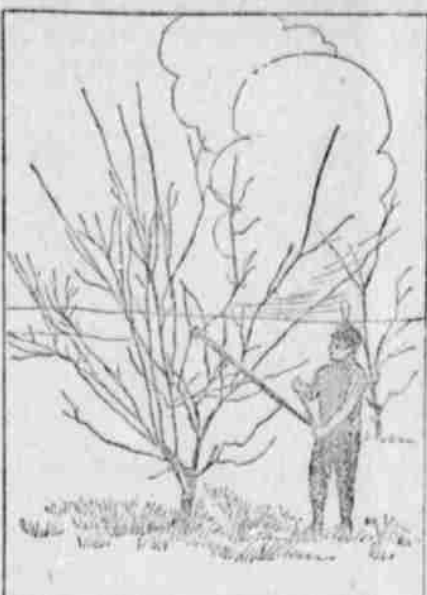
HORTICULTURE



A WORD ABOUT PRUNING.

Suggestions for Work Which Should Be Done Next Month.

It is a well-known old saying that the time to prune is when the saw is sharp. Practically most of our fruit-tree pruning is done in early spring.



Plum Tree Before Spring Pruning.

March being the accepted month. There is a manifest tendency among the most advanced fruitmen to do more summer pruning and less spring pruning. It is also quite plain that those who are not real experts in orchard matters are apt to overdo the spring work with the pruning saw. If pruning is carefully and conservatively done every March from the time the trees are planted out, it may be considered a safe operation. The excessive pruning of neglected trees at this time of year, on the other hand, is apt to be more of a damage than benefit, says the Country Gentleman. Under present circumstances, we have to recognize the fact that March



Same Tree Pruned, Showing Method of Heading Back.

will be the main month for pruning on farms and in small orchards. In face of this fact, it is well to urge the advice to be careful with the pruning tools, especially with the saw and the ax, and not to go too fast.

EFFECT OF MULCH.

It Does Not Retard Blooming of Strawberry Plants.

No. This question has been settled for 20 years. So long as the top of a plant is exposed to sunshine and air, so long will any mulch be impotent to retard its developing and blooming. If a plant like a strawberry plant be kept entirely covered with the mulch, the development will be retarded, but in that case the plant is likely to be destroyed by the mildews that will develop.

It used to be believed that placing straw around a tree or around a plant would keep its roots cold and thus delay blooming. This was desired to carry the tree or plant beyond the time of killing frosts. But it was not difficult to prove that the state of the roots had nothing to do with the time of leaving out of the tree or of its budding. In one of the demonstrations to prove this, a grape vine with its roots in the frozen ground, which was also covered with snow, was carried into a greenhouse and exposed to the light, heat and sunshine. The leaves came out as usual, though the roots could not supply moisture. Of course the exhaustion of the moisture in the vine resulted in its destruction. A tree or a plant can be kept back from blooming only by covering it and thus protecting it from the influences that cause it to bring forth leaves and blossoms. The first activities of a tree or plant come from energy stored up in the form of starch from the food taken the previous year.

Remember This.

Remember, when making up your order for trees for spring planting, that it is best not to plant big blocks all of one variety. Mingle the sorts, so that their blossoms may help to fertilize one another.

Look to Grapevine Trellis Posts.

See to grapevine trellis posts when a thaw comes the latter part of this month. Tighten and fasten wires. Tie up vines where needed. Have the trellis taut, straight and strong.

ABOUT SPRAYING.

Provide for a Good Fruit Year by Fighting Pests.

The indications are that this year will be what orchardists call "a good fruit year." To insure the best yield spraying should begin early. Spraying for codling moth is begun when the petals are fallen, and should be given as soon as possible after that stage. The calyx leaves are well open and are uppermost, and it is essential that poison be deposited there as the greater number of the early brood enter the small apple at the calyx.

The small apple grows rapidly and the second spraying should follow the first in at least ten days. The larvae that escape the first spraying will be mature insects within a short time after the first apple has dropped, and a spray should be given to protect the fruit from the second brood. At intervals of about two or three weeks, spraying for later broods has proved profitable.

For blight rot or scab, bordeaux mixture applied before the buds open destroy spores upon the bark and twigs. It should be combined with the second and fourth sprays for codling moth, and if the disease has been very serious, one or two more later sprayings will be profitable. Other insects and diseases have not been noted as serious where spraying for codling moth and blight rot have been applied.

In some instances a single spraying has secured a very great increase in the quantity of sound fruit, but in most cases a single spray has not been successful in proportion to repeated sprayings. The proportion of sound fruit on sprayed trees as compared with unsprayed trees has varied in different seasons, but an average for the past six years in nearly 50 per cent. number one fruit from sprayed trees, and less than ten per cent. from unsprayed trees. The per cent. of marketable fruit, including the second grade, has shown slightly greater differences in favor of sprayed trees.

The cumulative effect of spraying has been noted in the greater freedom from insects and diseases of the experiment station orchards and vineyards compared with neighboring plantations which have not been sprayed. The orchards have suffered no injury from canker worm, leaf-crumpler or tent caterpillar, which have been very numerous in neighboring orchards during several seasons. The protection from fungus has been fully as valuable. During the seasons 1905-1906 practically no loss was occasioned by blight rot, scab or rust, while unsprayed orchards in this locality have suffered seriously.

In spraying peach trees to prevent brown rot and leaf curl the first spray should be applied before the leaf buds open. The foliage of the peach is much more easily injured than is that of the apple, and after the trees are in leaf the bordeaux mixture should be reduced to half strength.

As the fruit reaches maturity the use of bordeaux is liable to discolor the fruit. The colorless ammoniacal solution of copper carbonate has been used during ripening, but has been less effective than bordeaux.

The plum varieties differ considerably in their liability to spray burn, but as a rule the bordeaux should be diluted half strength for plums.

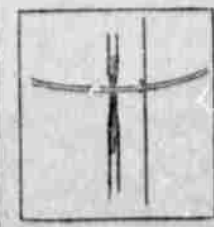
The spraying of the vineyard to prevent mildew has been uniformly successful. The crops from unsprayed vines have in several seasons been almost total failures when the sprayed vines have given fair crops.—R. E. Eastman.

AN IRON HOOP TRELLIS.

A Convenient Device for the Flower or Vegetable Garden.

We will now describe the making of something that will be of great service next spring, both to the handy man in his vegetable garden, and to his wife in her flower garden. It is a trellis made of the iron hoops that are now used so commonly upon sugar and other barrels. (Fig. 1.) They are made of stout wire, welded into a complete circle, and as barrels are constantly going to pieces, one can quickly get together quite a collection of these, when they can be asorted into uniform sizes.

A very attractive trellis made from such hoops is shown in Fig. 2. Three strips of wood, pointed at the lower end and finished with a knob at the top are provided, the length being a matter for individual taste, or rather a trellis for tomato plants will need not more than two hoops, while one for sweet peas may require a half dozen. The strips of wood should be of inch board, two inches wide. The hoops are secured to the uprights by small staples that are sold for putting up wire fencing. Other heights than those mentioned, suggests the Farr, and Home, will be needed for other plans. The wooden posts may be oiled or painted some attractive color.



PERUNA EDITORIAL NO. I.

Dr. Hartman is now offering Peruna to the public as a regular pharmaceutical product. It is just as ethical as any compound put up for the medical profession. No straining of medical ethics can find any fault with it. THE PRINCIPAL ACTIVE INGREDIENTS are prominently incorporated in the label on the bottle, that the people may know that the claims made for Peruna have a true justification.

The only departure we shall make from medical ethics in the conduct of Peruna affairs in the future, is the fact that we shall continue to advertise and sell our product TO THE PEOPLE.

If we would agree to sell to doctors only, to advertise for doctors only, then the medical fraternity would be obliged to recognize Peruna as being entirely within their approval.

BUT WE SHALL NOT DO THIS.

We shall continue to offer Peruna to the people. We shall continue to convey to the people our claims for Peruna as a household remedy. We shall continue to supply the people with free literature, teaching them how to use our medicine, teaching them how to avoid disease, teaching them many things of benefit to the home. We shall continue to do this, whether the medical profession like it or not.

We are proposing from this time on to take the public into our confidence. Notwithstanding that some imitators and substitutes will be attempting to put up something which they consider just as good as Peruna, we are going to draw aside the veil of secrecy and allow any one who chooses to know exactly OF WHAT PERUNA IS COMPOSED.

This ought to disarm all honest criticism. We expect, however, that criticism will continue. On some pretext or other those who are envious of the success of Peruna will continue to find fault. But we are determined to give such people no just complaint. PERUNA IS A GREAT MEDICINE.

It has become a household word in millions of homes. Our faith in the remedy is stronger than ever. Every year we expect to establish new plants in foreign lands until the people of all the world are supplied with this valuable household remedy.

WE CLAIM PERUNA TO BE A CATARRH REMEDY. Buy a bottle and try it. If it helps you, be honest and acknowledge that it has helped you. If you want us to we will publish your statement exactly as you furnish it to us. We will add no words, take away no words. If you wish us to we will publish your portrait in connection with it. We will not do this without your written request, without your entire consent.

Peruna has cured thousands of people of chronic catarrh, in many phases and locations. At least, that is what the people say to us, through unsolicited testimonials. Peruna will cure many thousand more, in spite of fabricated slanders to the contrary.

WE GUARANTEE EVERY BOTTLE OF PERUNA TO CONTAIN THE INGREDIENTS PRINTED ON THE LABEL. We guarantee that every testimonial we use is absolutely true—in the exact language of the testifier. We guarantee that every photograph published is the photograph of the person whose name it bears, that every word of every testimonial was authorized by the hand that signed it.

We are determined to beat our opponents by being fairer than they are, by dealing squarer than they dare to. We are determined to meet falsehood with truth, duplicity with candor, insincerity with sincerity.

We know that the users of Peruna will appreciate our stand. We believe that the dealers in Peruna will applaud our course. We expect even our opponents will be obliged to acknowledge finally that Peruna is not only an honest and useful remedy, but one of the GREATEST HOUSEHOLD MEDICINES ON THE CONTINENT.

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The Countess Potocha for ladies. Perfect style—perfect comfort. Patent Leather and fine kid.
Price, \$2.50 and \$3.00. If not at dealers ask us.
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Kansas City, Mo.



Obstacle to Society Fad.
"Society," says the Lady's Pictorial, "is looking for a novel form of entertainment. Let hostesses issue invitations bearing the request that every lady shall bring her pet aversion." The only obstacle we see in regard to our contemporary's proposal is that so many ladies would have a difficulty in getting their husbands to come along.—Punch.

At the Church Fair.
He paused at the booth where the prettiest girls were in charge. They greeted him with winning smiles. "Can you change a ten?" he anxiously inquired. "We have no change," they chorused. "And I have no ten," he reluctantly murmured. Then he moved away.

WHAT CAUSES HEADACHE.
From October to May, Colds are the most frequent cause of headache. LAXATIVE BROMO QUININE removes cause. E.W. Grove on box 250

Derivation of a Term.
The reason we call money "dust" is, as I've caused to know it. To get it we must raise the wind—How easy then to blow it!

The Alternative.
He was growling because his wife wore waists buttoned down the back. "But you know, dear," she said sweetly, "you wouldn't like it at all if I wore one unbuttoned down the back."—Harper's Bazar.

Ask Your Grocer for "Our-Pie."
If your grocer is one of the few who have not "OUR-PIE" Preparation in stock send his name and 10 cents to D-Zerta Food Co., Rochester, N. Y., and they will mail you a full size, two pie package free. Three kinds, for making delicious lemon, chocolate and custard pies.

It has done me good to be somewhat parched by the heat and drenched by the rain of life.—Longfellow.

DON'T SPOIL YOUR CLOTHES.
Use Red Cross Ball Blue and keep them white as snow. All grocers, 5c a package.

Spanish Proverb.
Many a loud is wealthy and a clever man hard put to.

Lewis' Single Binder straight 5c. You pay 10c for cigars not so good. Your dealer or Lewis' Factory, Peoria, Ill.

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